

WHAT IS CLAIMED IS:

- 1                   1.     A computer to telephone interface card comprising:  
2                   a plurality of audio data input ports for receiving audio input data  
3     from the computer;  
4                   a mixer having a plurality of inputs in communication with the  
5     plurality of audio data input ports, and having an output, the plurality of mixer  
6     inputs receiving the audio input data and the mixer, in real-time, generating a mixed  
7     audio output data signal at the mixer output; and  
8                   a converter having an input receiving the mixed audio output data  
9     signal, and having an output for connecting to a phone line to generate and provide  
10    mixed audio output to the phone line based on the audio input data received at the  
11    plurality of audio data input ports.
- 1                   2.     The interface card of claim 1 wherein the converter further  
2     comprises:  
3                   a digital-to-analog converter.
- 1                   3.     The interface card of claim 1 wherein the converter further  
2     comprises:  
3                   a format converter.
- 1                   4.     The interface card of claim 1 wherein the plurality of audio  
2     data input ports further comprises:  
3                   a plurality of buffered audio data input ports.
- 1                   5.     The interface card of claim 4 further comprising:  
2                   a switch configured to receive the audio input data from the computer  
3     and to distribute the data to the plurality of audio data input ports.
- 1                   6.     A method of providing mixed audio output to a phone line,  
2     the method comprising:

3 providing a computer to telephone interface card including a plurality  
4 of audio data input ports for receiving audio input data from the computer, and a  
5 mixer having a plurality of inputs in communication with the plurality of audio data  
6 input ports, the mixer having an output, the plurality of mixer inputs receiving the  
7 audio input data and the mixer, in real-time, generating a mixed audio output data  
8 signal at the mixer output, the interface card further including a converter having  
9 an input receiving the mixed audio output data signal, and having an output for  
10 connecting to the phone line to generate and provide mixed audio output to the  
11 phone line based on the audio input data received at the plurality of audio data input  
12 ports.

1 7. The method of claim 6 further comprising:  
2 receiving first voice input data followed by second voice input data  
3 at the plurality of audio data input ports;  
4 receiving background noise input data at the plurality of audio data  
5 input ports; and  
6 mixing the first voice input data followed by the second voice input  
7 data with the background noise input data.

1 8. The method of claim 7 wherein the first voice input data is  
2 followed immediately by the second voice input data to form concatenated speech,  
3 and wherein the mixing masks a transition between the first voice input data and the  
4 second voice input data.

1 9. The method of claim 8 wherein mixing further comprises:  
2 adjusting relative volume levels of the first voice input data, the  
3 second voice input data, and the background noise input data to further mask the  
4 transition between the first voice input data and the second voice input data.

1 10. The method of claim 6 further comprising:  
2 providing a plurality of buffered audio data input ports on the  
3 interface card.

1                    11.    The method of claim 10 further comprising:  
2                    receiving first voice input data at the plurality of buffered audio data  
3 input ports;  
4                    receiving second voice input data at the plurality of buffered audio  
5 data input ports; and  
6                    mixing the first voice input data followed by the second voice input  
7 data so as to overlap an end of the first voice input data with a beginning of the  
8 second voice input data to mask a transition between the first voice input data and  
9 the second voice input data.

1                    12.    The method of claim 11 wherein mixing further comprises:  
2                    adjusting relative volume levels of the first voice input data and the  
3 second voice input data to further mask the transition between the first voice input  
4 data and the second voice input data.

1                    13.    The method of claim 11 further comprising:  
2                    receiving background noise input data at the plurality of buffered  
3 audio data input ports; and  
4                    mixing the first voice input data followed by the second voice input  
5 data with the background noise input data to further mask the transition between the  
6 first voice input data and the second voice input data.

1                    14.    The method of claim 6 further comprising:  
2                    providing the converter with a digital-to-analog converter.

1                    15.    The method of claim 6 further comprising:  
2                    providing the converter with a format converter.

1                    16.    The method of claim 6 further comprising:  
2                    providing the plurality of audio data input ports with a plurality of  
3 buffered audio data input ports.